

**AMENDMENTS TO THE CLAIMS**

1. **(Currently Amended)** An isolated nucleic acid which comprises a polynucleotide encoding a protein that binds a D-galactosyl group through the  $\alpha(1\rightarrow6)$  bond to the hydroxyl group attached to the carbon atom at 6-position of the D-glucose residue in a sucrose molecule to form raffinose, wherein said polynucleotide comprises a nucleotide sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 3,
- (b) a nucleotide sequence depicted by the 236<sup>th</sup> to 2584<sup>th</sup> nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 4,
- (c) a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 5, and
- (d) a nucleotide sequence depicted by the 134<sup>th</sup> to 2467<sup>th</sup> nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 6;
- ~~(e) a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 7;~~
- ~~(f) a nucleotide sequence depicted by the 1<sup>st</sup> to 1719<sup>th</sup> nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 8;~~
- ~~(g) a nucleotide sequence obtained from a polynucleotide which is amplified from a nucleic acid obtained from beet with a combination of a PCR primer selected from the group consisting of SEQ ID NO: 11 and SEQ ID NO: 13 and a PCR primer selected from the group consisting of SEQ ID NO: 12 and SEQ ID NO: 14, wherein said nucleotide sequence hybridizes with a nucleotide sequence complementary to the nucleotide sequence of (a) or (b), in a buffer comprising 0.9M NaCl and 0.09M citric acid at 65°C to 68°C, and~~

(h) ~~a nucleotide sequence obtained from a polynucleotide which is amplified from a nucleic acid obtained from mustard or rapeseed with a combination of a PCR primer selected from the group consisting of SEQ ID NO: 15, SEQ ID NO: 17 and SEQ ID NO: 19 and a PCR primer selected from the group consisting of SEQ ID NO: 16, SEQ ID NO: 18 and SEQ ID NO: 20, wherein said nucleotide sequence hybridizes with a nucleotide sequence complementary to the nucleotide sequence of any one of (e) to (f), in a buffer comprising 0.9M NaCl and 0.09M citric acid at 65°C to 68°C.~~

**2-3. Cancelled**

4. **(Previously Presented)** An isolated nucleic acid comprising a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 3.

5. **(Previously Presented)** An isolated nucleic acid comprising the nucleotide sequence depicted by the 236th to 2584th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 4.

6. **(Previously Presented)** An isolated nucleic acid comprising a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 5.

7. **(Previously Presented)** An isolated nucleic acid comprising the nucleotide sequence depicted by the 134th to 2467th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 6.

**8-15. Cancelled**

16. **(Previously Presented)** An isolated nucleic acid comprising the nucleic acid of claim 1, which is operatively linked to a promoter.

17. **(Previously Presented)** A vector comprising the nucleic acid of claim 1.

18. **(Previously Presented)** A transformant, wherein the nucleic acid of claim 1 is introduced into a host cell.

19. **(Original)** A transformant, wherein the nucleic acid of claim 16 is introduced into a host cell.

20. **(Original)** A transformant, wherein the vector of claim 17 is introduced into a host cell.

21. **(Previously Presented)** The transformant of claim 18, wherein the host cell is a microorganism.

22. **(Previously Presented)** The transformant of claim 18, wherein the host cell is a plant cell.

23. **(Previously Presented)** A method for producing a raffinose synthase which comprises the steps of:

culturing or growing the transformant of claim 18 to produce the raffinose synthase, and collecting the raffinose synthase.

24-27. **Cancelled**

28. **(Previously Presented)** The nucleic acid of claim 16, wherein said promoter is effective in a plant cell.

29. **(Previously Presented)** The nucleic acid of claim 16, wherein said promoter is

Application No. 09/301,766  
Amendment dated October 9, 2008

Docket No.: 0020-4559P

effective in a yeast cell.

**30. Cancelled**